

Training the Mind to Deploy

by Captains Sam Grable and Troy Thomas

This is the first installment of a two-part serial on the need for financial managers who are trained and skilled at attaining situation awareness and making decisions in deployed conditions.

Introduction

Readers of *The Air Force Comptroller* should be familiar with recent deployment experiences of some Air Force financial management professionals. You may recall SSgt Jackie McElroy lifting off with the first chalk from RAF Lakenheath with \$50,000 cash in support of Operation SKY ANVIL or SrA Cliff VanGieson from Ramstein Air Base deploying in support of Joint Task Force SHINING HOPE with a quarter of a million dollars in cash and checks. Both were armed—both early to the fight.¹ They faced a high-stakes environment created by deployment into a non-friendly theater, the necessity for quick decisions, and substantial personal financial liability for the assets in their charge.

Their experience is representative of the type of environment in which financial managers are being asked to perform. We eat, sleep, and work alongside warfighters. In emergent situations, we arrive at the area of operations before the bulk of combat forces. Where once largely an afterthought, financial managers are now part of the first team. Increasingly, we perform in the pressure-packed environment of the operator; we—as they—must be ready.

In *The Green Eyeshades of War* (*The Air Force Comptroller*, Volume 35, Number 1) Colonel Larry Spencer laments that throughout the 20th century the Air Force financial management community was not adequately prepared for the challenges of armed conflict. He points out that one of the key lessons we experienced from one conflict to the next was the critical nature of effective pre-war training. The need for robust preparation programs has been a consistent message from other senior leaders as well. CMSgt Larry Gonzales, now the Executive for Enlisted Matters for SAF/FM, cautioned in 1998 that while the Air Force Top Dollar competition serves to validate readiness, it is the day-to-day unit training that must prepare us for our wartime mission.² And it's not enough to be expert at quoting chapter and paragraph of applicable regulations and instructions. For example, Major General Everett Odgers, AFMC Comptroller, opened up the 1999 Air Expeditionary Force Budget Officer Training session by stating that deployed budget officers must be officers first, warriors second, and comptrollers third; they are professional leaders accountable for the decisions they make.³

These observations are part of a growing awareness that, particularly within the Expeditionary Aerospace Force (EAF) construct, uniformed financial managers must be prepared to deploy, to survive, and to make decisions in a tough environment.

The Deployed Environment of the 21st Century is Demanding

Preparing financial managers to support the wide array of military operations is a topic of increasing significance because the environment in which we operate has changed—and continues to change—in remarkable ways. One of the most dramatic influences has been the dynamic nature of post-Cold War geopolitics. The demise of the former Soviet Union, and the resultant end of the bipolar world to which we were accustomed, has led to unforeseen complexity in the international system. Examples include increased uncertainty regarding friend or foe and greater threat of proliferation of weapons of mass destruction. This environment has spawned changes in the way the National Command Authority chooses to employ aerospace power. For example, Air Force deployments have quadrupled since 1986.⁴ But the increase in operations tempo is just one manifestation of the changing environment; not only has the quantity of operations changed markedly, so too the variety, scope, and complexity of missions. Institutionally, this experience is intensified because events of the late 1980's shook the only global paradigm the Air Force knew since establishment in 1947. One need only consider the wide range of variation between operations in Haiti, Somalia, or Kosovo to recognize the only fundamental 'givens' are that we will deploy and that the battlespace will be rife with uncertainty.

The deployed environment we face today may best be described as *naturalistic*. Such settings are characterized by ill-structured problems, uncertain and dynamic situations, shifting, ill-defined and competing goals, time stress, high stakes, multiple players, and conflicting norms.⁵ Clearly, many elements of the naturalistic environment are not new to conflict. Nearly two centuries ago, noted military strategist Carl von Clausewitz wrote extensively about the uncertainty—the fog and friction—of warfare.

But the 21st century version of fog is markedly different. Combat and support personnel are experiencing it at lower grades with frequency and intensity that exerts great demand on the human mind. Today, combat pilots must process massive quantities of data and react to threats within tenths of a second. Airborne battle managers track multiple targets while at the same time sending and receiving manual and automated communications. Individual intelligence analysts bear the weight of error, including the possibility of international incidents such as the accidental bombing of the Chinese Embassy in Belgrade. Junior financial managers deploy to unfamiliar areas, on unfamiliar continents, on short notice. Clausewitz's fog appears to have evolved from a lack of decision making certainty caused by want of data, to a lack of decision making certainty brought about by the unsettling demands of the naturalistic battlespace, intensified by an overabundance of data.

In response to post-Cold War realities, the Air Force has increasingly sought mobility, flexibility, and technological innovation. For example, we are well into a transition to the EAF, intended to improve our capability to rapidly deploy forces to austere locations across the globe and immediately initiate operations. Air Force financial managers have been tasked to provide approximately forty enlisted professionals and officers to support steady-state expeditionary needs.⁶ Moreover, revolutionary advances in technology are changing the nature of information processing and decision making. Military success is increasingly dependent on the ability to process, assess, and act on relevant data more effectively than an adversary. The Air Force has invested substantial resources developing faster systems, better sensors, and smarter weapons.

These responses to the changing environment have not necessarily simplified decision making conditions for deployed financial managers. For example, technology may actually contribute to indecision; more data is leveraged only insofar as we can process it, extract useful information, make timely decisions, and possess the will to act. Joint Vision 2020 cautions that information superiority neither equates to perfect information, nor eliminates uncertainty. Rather, information systems, processes, and operations add their own sources of friction and fog.⁷ Information technology may also contribute to data overload and feed "the dangerous illusion that certainty and precision in war are not only desirable, but attainable."⁸

Simply put, enhanced mobility, flexibility, and technology are responses to, not solutions for, the changing environment. In and of themselves they do not 'fix' the problem; each in its way helps gird us for success while simultaneously intensifying the deployed experience. It is at least as important to train the human mind to keep pace with demands of the dynamic naturalistic setting. We should not assume financial managers will be more successful as a result of Air Force responses such as programmed de-

ployment cycles or the latest technology innovations. Deployed financial managers such as SSgt McElroy and SrA VanGieson provide anecdotal evidence of the need to do more; the exhortation by career field leaders provides clear direction. We must deliberately train the minds of our financial managers to enable operations within a naturalistic environment.

Successful Deployed Financial Managers Possess Dynamic Cognitive Skills

Our experience in comptroller organizations, deployed environments, and Combined Air Operations Centers (CAOC) suggests success in naturalistic settings often depends upon one or two individuals who just seem to have a knack of knowing what to do and when. Maybe it was one particular technical sergeant or lieutenant colonel who had been deployed several times and could distill vast quantities of data into several relevant cues. They took action when others were uncertain how to proceed. This experience left us wondering, “What exactly sets these extraordinary individuals apart?”

Research suggests the ability to perform in a naturalistic environment is strongly dependent on maturity in cognitive skills such as situational awareness, decision making, and synchronization. Situational awareness is the ‘great enabler,’ and thus may be the most important of these three competencies. Essentially, it is sensing and understanding what is going on around you. Doing so becomes increasingly difficult as the stimuli increase and the situation becomes more complex—such as in a naturalistic setting. However, once an individual understands what is going on, a decision path is usually evident.⁹ Thus it is extraordinarily important for deployed financial managers to be trained to recognize cues and patterns that indicate the dynamics of a situation.

Situational awareness enables effective decision making. You may recall the traditional decision making approach from your training experience. Whether taught explicitly or implicitly, Air Force personnel are generally conditioned to assess alternatives, perform cost/benefit analyses, select the optimal solution, and implement it. This approach is useful when in static conditions, but becomes unworkable in the naturalistic environment because it is simply too time consuming. Financial managers who attempt to use traditional decision making methods in a naturalistic battlespace will be overcome by fast moving events and quickly marginalized.

The Recognition-Primed Decision-making (RPD) process model ably describes the kind of decision making processes top performers employ in naturalistic settings. RPD depicts how experienced individuals, such as our technical sergeant or lieutenant colonel, make decisions in time-constrained situations when circumstances do not allow for development and evaluation of multiple alternatives.¹⁰ RPD asserts “experienced decision makers can identify a reasonably good option as the first one.”¹¹ Additional characteristics include an emphasis on ‘satisficing’—selecting the first workable option.¹² Rather than attempt to evaluate all possible options, the decision maker focuses on making a reasonable decision early, then modifies it as challenges emerge. Described as seeking a ‘70 percent solution’, this approach frees the naturalistic decision maker from a time-consuming—and rarely feasible—search for the optimal choice.

A third necessary skill is synchronization—arranging activities in time and space to achieve a desired outcome.¹³ For example, a deployed financial manager must know both when and where to obtain funding authorization to enable subsequent action by a commander. Synchronization has strong roots in current military doctrine; US Army Field Manual 100-5 proffers that some activities must occur before the decisive moment and, although separated in time and space, they must be well synchronized if their combined effects are to be felt at the decisive time and place.¹⁴ Synchronization cannot be achieved until leaders first mentally simulate the consequences to be produced and how they must sequence their activities to yield the overall desired outcome—“synchronization thus takes place first in the minds of commanders.”¹⁵

Successful Financial Managers Possess Dynamic Cognitive Skills

- **Situational Awareness**
- **Decision Making**
- **Synchronization**

Think about it. To be successful in deployed environments characterized by high-stakes, time compression, and uncertainty, financial managers need to understand what is going on around them, be equipped to make good decisions quickly, and know how and when to take action to achieve desired effects.

The Problem—We Do Not Adequately Train Cognitive Skills

The need for highly developed thinking skills in the naturalistic environment is well documented. In fact, numerous military and paramilitary organizations have already embraced this reality. For example, the Federal Emergency Management Agency (FEMA), National Fire Academy, and Federal Bureau of Investigation have been developing institutional awareness of cognitive requirements and are implementing training and education programs. The United States Army, concerned that the increase in information flow will drown staff officers in data “while their commanders thirst for information”, has initiated a simulator-based training program to improve the accuracy of situation assessments and the quality of decisions.¹⁶ The United States Marine Corps (USMC) is also in the forefront, making naturalistic decision making a guiding principle for The Basic School (TBS) and the Infantry Officer’s Course (IOC). According to a former commandant, Colonel Robert E. Lee, “we develop the leader who can commit to a decision, communicate the decision, and have the will to act.”¹⁷

Institutionally, the Air Force has not actively embraced the need for cognitive skill training across the force. There are several barriers that have prevented us from capitalizing on what other organizations, such as FEMA and USMC, have long recognized. First, we place disproportionate emphasis on technology solutions to what is as much a human as technical problem. Technology innovations are critical, but address only the technical component of the socio-technical system represented by the pilot and her cockpit data displays or the financial manager and his computer systems.

Second, the functional orientation of personnel segments the force. For example, Air Force financial management recruits have traditionally been trained in their functional specialty and have not been effectively indoctrinated on the role or application of aerospace power. As a result, we have created financial managers, not airmen. In a naturalistic environment, successful financial managers must develop situational awareness by first appreciating their role within the context of aerospace power and fully understanding how their efforts fit within the overall plan to support the mission.

Third, training for effective performance in the new setting is provided only to a select few. For example, although simulation has greatly enhanced effectiveness in areas such as aircrew and airborne battle management training, the use of high fidelity simulation has only recently begun to propagate to support career fields. Notably, Air Force financial managers recognized in the early 1990s the need to simulate deployed conditions and train skills, and instituted the Top Dollar mobility competition. This has proven to be a solid first step, not an acceptable end state. According to Capt Dan Sheesley, who recently deployed as a Joint Task Force comptroller, Top Dollar training “only scratches the surface of the real thing.”¹⁸

Think about it. To perform effectively under deployed conditions, financial managers must be better prepared than ever before to assess data, extract information, make decisions, and implement those decisions. We cannot be dependent upon the expert technical sergeant or experienced lieutenant colonel, because they simply may not be available. And with responsibility continually being pushed to junior grades, we cannot wait to develop skills through real-world experience. We must find ways to train experience and to equip the minds of our people to successfully perform in tough conditions.

In the second installment of this article, we will discuss some proven methods that could help better prepare our financial managers for the deployed environment.

NOTES

¹To read more about SSgt McElroy’s experiences, refer to Paul G. Hough, *Finance Goes Expeditionary*, (The Air Force Comptroller, Vol 33, No. 3, July 1999). For information on SrA VanGieson’s deployment, read Randy Newcome, *Joint Task Force Shining Hope, The Real Top Dollar*, (The Air Force Comptroller, Vol 33, No. 3, July 1999)

²Larry P. Gonzales, *USAFE Top Dollar ’97*, (The Air Force Comptroller, Vol 32, No. 1, January 1998)

³Mike Vaughn and Mike Wilson, *Air Expeditionary Force Budget Officer Training at Aeronautical Systems*

Center, (*The Air Force Comptroller*, Vol 34, No. 1, January 2000)

⁴DefenseLink, DoD 101, <http://www.defenselink.mil/pubs/dod101/slide15.html>

⁵Judith Orasanu and Terry Connolly, *The Reinvention of Decision Making*, Decision Making in Action: Models and Methods, Ed. Gary Klein, Judith Orasanu, Roberta Calderwood, and Caroline E. Zsombok. (Norwood, New Jersey: Ablex Publishing Corporation, 1993), 7

⁶Financial Management AEF Cycle 2 Sourcing and Scheduling Spreadsheet provided by SAF/FMP.

⁷Chairman of the Joint Chiefs of Staff (CJCS), Joint Vision 2020, Joint Staff, Pentagon, Washington, D.C., 9-10

⁸United States Marine Corps (USMC), Command and Control, (MCDP 6, Department of the Navy, 4 Oct 1996), 59

⁹Hann, Reuben L., *Human Engineering Division, Armstrong Laboratory Colloquium Series: A Conversation with Gary Klein*, CSERIAC Gateway, (Vol V., No. 1, 1994), 2

¹⁰Gary Klein and Beth Crandall, *Recognition-Primed Decision Strategies*, United States Army Research Institute for the Behavioral and Social Sciences, ARI Research Note 96-36, March 1996, 2

¹¹Gary A. Klein, *A Recognition-Primed Decision (RPD) Model of Rapid Decision Making*, Decision Making in Action: Models and Methods, Ed. Gary Klein, Judith Orasanu, Roberta Calderwood, and Caroline E. Zsombok. (Norwood, New Jersey: Ablex Publishing Corporation, 1993), p.138.

¹²Klein and Crandall, *Recognition-Primed*, 2

¹³Dr James D. Baker, Lecture and Discussion notes, George Washington University ADSCI 217, 4 March 1998

¹⁴Department of the Army, Field Manual FM 100-5, Operations, (Washington, D.C., 14 June 1993), <http://www.atsc-army.org/cgi-bin/atdl.dll/fm/100-5/100-5c2b.htm>

¹⁵*Ibid.*, no page

¹⁶Jared T. Freeman, Ph.D., Marvin S. Cohen, Ph.D., and Daniel Serfaty, *Information Overload in the Digital Army: Simulator-based Training for Prevention, Detection & Cure*, Research Paper, (Arlington, VA: Cognitive Technologies, Inc., 1997), 1

¹⁷Interview with Colonel Robert E. Lee, USMC, at The Basic School, Quantico, VA, 26 February 1998.

¹⁸Sheesley, Dan., *Perspectives from a JTF Comptroller* (*The Air Force Comptroller*, Vol 34, No. 1, January 2000)



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